

# LaRouche to high school students: Look to the future, colonize space!

*Democratic presidential contender Lyndon LaRouche, Jr. was invited to speak on Feb. 5 at Memorial High School in Manchester, New Hampshire. He began his address to 500 students with a discussion of the financial crisis, making the point that the financial bubble that is now bursting is bigger than that of the 1930s, and therefore the crash will be deeper, if it is not stopped. He then asked his audience to forget for a moment the depression, the dangers of war, the problems of our world, and to think instead of what problems the next President should be solving, what challenges the next generation will have to overcome. The following are excerpts from that portion of his talk, and from the lively discussion that followed.*

. . . Now, my problem is this: As President, my job is to do everything government should do to ensure that U.S. industry has the most advanced technology in the world available to it, as rapidly as possible. There are two sides to this: One side is to make the technologies available; the other side is to make sure we are supplying cheap credit, and investment tax credit incentives, to make sure these technologies are used.

My problem is: Knowing what the areas are in which scientific progress will be determined in the next 50 years, how could I put all of this in one package, so that—in terms of international cooperation among governments, with our government, and in cooperation between the private and public sector—how could we be sure, that we would be generating these technologies as rapidly as we need them?

So, back some years ago, back in 1985, I had the occasion, at an international conference in Virginia, to present a paper in honor of one of the United States' space pioneers, a friend of mine, Krafft Ehrlicke—he died a year earlier. And, Krafft, among his many projects, developed the industrialization of the Moon project for the United States—for NASA, and for General Dynamics, and others. And, so I thought it was appropriate, because Krafft had always wanted to do that, to define our exploration of Mars, which is what the immediate objective of exploring the Moon is: to get a stepping-stone to Mars, and beyond.

So, I defined a Mars-Moon colonization, industrialization project, to accomplish the mission of establishing a permanent, manned colony on Mars beginning the year 2027.

The President's Space Commission, about 12 months later, made exactly the same general proposal, but proposing somewhat different specific goals, and objectives, but also selected the year 2027, as the target year for the beginning of the permanent colonization of Mars. Just the same way that President Kennedy proposed the end of the 1960s, as the date for Man landing on the Moon—we reached it.

Starting colonies on Mars in the year 2027—from today—is just as feasible as putting a man on the Moon, in the course of the 1960s. It's just a bigger project, more long-range, but exactly the same method of approach, and the same kinds of benefits.

I'll give you a couple of examples of what this means. I'll give you another shock, but those of you who are studying physics, or something like that, can work this out for yourself.

## **How are we going to get up there?**

I don't like the idea of human beings traveling around a long time in space, at microgravities, or fractional gravities, and, since we have not determined yet the effect of keeping human beings in these conditions for extended periods—though we know they're dangerous. I say, all right, let's do the smart thing! In traveling between Earth orbit and Mars orbit, let's go at a constant acceleration of one gravity. That would mean, and you can figure it out for yourselves, that one gravity of constant acceleration, or deceleration on the down-side of the trip, means that the average time to move from the orbit of the Earth, to the orbit of Mars, will be *two days*.

Now, the question is, how do you get up there? This will use a unit which will have 1 terawatt fusion power propulsion. It's a system on which we're already working. Now, how do we get up there, from Earth? Well, the shuttle is not a good idea. Krafft Ehrlicke and others opposed the shuttle back in the early 1970s, not because it doesn't work, but for two reasons: First of all, it's too dangerous. There's nothing you can do to eliminate the fact that these things are dangerous—that is a big bomb, those rockets, each one of them. Secondly, it costs too much. The cost of getting a pound of payload into space is too much. And, we already knew at the end of the 1960s how to build a better system. But, the way

government works, they say, “Well, let’s go with the practical thing we’ve got on the table now, instead of building something better!” And that was a big mistake, and always is a mistake on the part of government. When politicians start talking about being practical, hold on to your wallets!

Instead, we develop what’s called the Sanger Project. Sanger was another famous space scientist, and the design was as follows: We can build a special kind of jet, it’s called a scramjet. A scramjet is about the size of a Boeing 707, and takes off like an ordinary airplane. It gets up to about 150,000 feet, and is hitting then, a speed of eight times the speed of sound. It goes up a bit further, and out from underneath that scramjet comes a shuttle craft—a rocket shuttle craft—which goes up to what’s called Low-Orbiting Position. And, in Low-Orbiting Position, we build a low-orbiting space station. We assemble parts at the low-orbiting space station, we build space tugs, which we already have designed; we move the space tugs, then, out to 22,000 miles, approximately—geostationary orbit—and there we begin to build, by these shuttle trips, a permanent space terminal. From that, we move into moving to the Moon—this time, to industrialize it.

Now, we’ve gotten a cheaper way of getting a ton of payload into geostationary orbit. That’s our first objective. That’s the first project, which must go on now; it must be completed during the 1990s. I have the designs for it, from the scientists who worked on them. I decided I liked them. I’m going to go with it!

Remember that the problem with the rocket is, the major component of weight of fuel of a rocket is oxygen, using oxygen to push up through the atmosphere. What’s in the atmosphere? Oxygen! Why do you have to carry oxygen through the atmosphere? Use an aeronautic principle, and get above the atmosphere by these methods, and you have a tremendous saving in cost.

Then, we get to the industrialization of the Moon; we produce most of the weight on the Moon. Spacecraft for travel to Mars will involve about 200 passengers each, flying in flotillas of five, taking an average trip of two days or so, to get there. The freight we require on Mars will go in large ships, powered by the same 1 terawatt propulsion system, which will be the size of supertankers. They will carry the freight, they’ll be unmanned; with that, we will simply put into place the materials to build the first controlled Earth-like environment on the surface of Mars, and that begins colonization.

### **You have to be able to think**

Now, this means that for you, a higher percentage of you than during the past 20 years will be going into science and engineering. This means that the teachers of the future, of the next generation, will be preparing to teach classical subjects, with an emphasis even greater than that which was characteristic of schools back before 1968, and 1963. This

means that where New Math has been the curriculum today, it will be junked, and we will go back to geometry, especially projective, and other synthetic geometry—constructive geometry. It means that the study of the classics, the study of tragedy, the study of literature will be at a premium. It means that tests which are based upon multiple-choice questions, will no longer be considered qualifying tests for diploma credits, that you have to be able to write an essay, which is competent and literate on the subject on which you are asked a question, as part of your testing, to prove that you can *think*, and project your mind in a coherent way. You don’t have to be perfectly thinking, but you should be able to think.

We will need teachers, scientists, engineers, and people who will go into factories, as operatives, not like the old shoe factories, and so forth, we have here, but to work on new kinds of jobs, which will be, technologically, at the level of engineering employment today. And that’s your future. I don’t think you’d like to think about any other.

So, let’s get to the questions!

### **Reform of the banking system**

*Questions covered such topics as the AIDS epidemic, economic policy, charges of credit card fraud against La-Rouche associates, and how to stop terrorism. Here is La-Rouche’s reply to one on, “How do you plan to rehaul the banking system?”*

Very simple. You see, in my view, Roosevelt proposed a couple of good things back during the war, particularly for what we call today the “developing sector.” What happened at Bretton Woods between ’44 and ’46, and what has happened since, has been the biggest piece of stupidity in monetary policy imaginable, particularly since we already made those kinds of mistakes before in the Versailles monetary system, before we got the Great Depression and Adolf Hitler. So, we’re repeating the same mistakes.

Now, the problem is this. Do not assume that governments are intelligent, just because many people in government are, personally. When government, particularly this government, and this Establishment of ours gets a bone in its head, it won’t quit until it gets smashed in the head.

The problem has been, we’re in the wrong monetary system! We’ve been preaching it, the press has been preaching it, debating it; people are still debating balancing the budget, which from an economics standpoint is stupid—it means cutting social security, that’s what it means. So that what happens is, the Establishment and government finds itself in a crisis, it gets down on its knees and says, “Somebody save us, we’ve run out of solutions.”

And, then you’re able to do what I’m proposing to do. What I’m proposing to do, even though it’s the right thing to do—I could have all the evidence going for me, on all points, as I have had for 20 years—but, it’s not going to happen until a crisis comes along, and these boneheads decide they need an alternative.